

ABSTRACT OF DISCLOSURE

A variable acuity imager incorporates an array of detection elements for light energy, in the visible, infrared, ultraviolet, or light energy in another region of the electromagnetic spectrum with a means to change the spatial configuration of the array to include "superpixels" by combining energy detected by adjacent elements, thus permitting any number of high-resolution "foveal" regions to be placed within the confines of the focal plane array and moved around at the frame rate of the imaging device. Detectors to measure the pitch, yaw and roll angle rates of background imagery using velocity-sensing circuitry are employed for variation of the foveal regions to accommodate motion of the array.